

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1]A fixing means provided in a periphery of a binding belt in order to maintain a binding belt and a binding belt of hollow where a tube and a baffle were formed in an inside to loop shape of a desired path, A muscular build-up instrument which has a connecting means which connects to a tube mutually a pump which sends in air, a pneumatic pressure indicator which measures pneumatic pressure in a tube, a tube inside these binding belt, a pump, and a pneumatic pressure indicator.

[Claim 2]The muscular build-up instrument according to claim 1 which provided a thick elastic body along with the inside of a binding belt.

[Claim 3]The muscular build-up implement according to claim 1 or 2 which provided stops in a communication trunk between a tube of a binding inside-of-the-body part, and a splicer.

[Translation done.]

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to a muscular training apparatus usable not only in a healthy person but those who have an obstacle in a motor function, and the muscular build-up method especially about the muscular build-up instrument used for muscular enhancement, and the muscular build-up method using it.

[0002]

[Description of the Prior Art]Generally in the conventional muscular-power-strengthening method, the muscular build-up instrument which gives load to muscles using the resistance force based on the elastic force of heavy lifts, such as a dumbbell and a barbell, a spring, rubber, etc., etc., etc. is used.

[0003]By the way, muscular enhancement is performed through the process of "super compensation." Here, "super compensation" means that the state before destroying a muscle cell by the recovery process of fatigue will be exceeded by muscles, when muscles are tired by training and a muscle cell is destroyed. Therefore, in aiming at muscular build-up, it becomes important how muscles are tired efficiently or how if it puts in another way, load will be efficiently given to muscles.

[0004]The above-mentioned conventional muscular build-up method makes the weight of a dumbbell etc., and the load by movement given to muscles using elastic force, such as a spring, increase, and makes the fatigue which this produces to muscles increase. That is, by making ***** and the quantity of motion itself which muscles perform by that cause increase to the direction in which the elastic force produced for ***** gravity, a spring, etc. bars muscular movement to a dumbbell, fatigue is efficiently generated to muscles and this aims at muscular enhancement.

[0005]In order to increase a muscular enhancing effect in the case of such a conventional muscular build-up method, the weight and the resistance force of an instrument must be increased or the number of times of elastic movement must be increased. However, even if it increases the load by movement to muscles inconsistently, other muscles protect the increased load, distribution of load is performed, the muscles besides the purpose reinforce or muscles, a joint, etc. are damaged depending on the case.

[0006]That the difficulty of such a conventional muscular build-up method should be conquered, these people invent the epoch-making muscular build-up method, and are performing application of the patent application No. 313949 about it in Heisei 5.

[0007]The invention by the application is the method of a muscular [of giving and having load in muscles and aiming at muscular enhancement] reinforcing method by checking the blood flow which flows into muscles. The part near [when the contents are explained a little in more detail] the heart which approaches to the muscles which try to aim at enhancement, That is, it is the training method of the muscles which give the suitable load by blood-flow inhibition to muscles by adjusting

the clamping force, make muscles produce fatigue to the higher rank part which approaches to the muscles, have [give clamping force which makes circulation check,] in it by that cause, and enable enhancement with muscular sufficient efficiency.

[0008]And in this muscular build-up method, muscles are efficiently tired by checking the blood flow which flows into muscles and checking supply of oxygen to muscles, and exclusion of the lactic acid and other wastes from muscles. That is, making smaller than before load by movement given to muscles, by giving the load by blood-flow inhibition to muscles, this muscular build-up method compensates and has a total amount of the load given to muscles, and tries to aim at muscular enhancement.

[0009]Therefore, in this muscular build-up method, the fatigue produced to muscles becomes very large only by giving the light load by movement to muscles. Therefore, while this muscular build-up method can reinforce the purpose muscles more specifically by selection of the position which checks a blood flow, By decreasing the actual quantity of motion which muscles need to perform, it has the outstanding effect that it is possible to decrease damage to a joint or muscles, and a training period can be shortened further.

[0010]However, in order to enforce this method, it is possible to check the blood flow which flows into the muscles which try to aim at enhancement, and the muscular build-up instrument which has been given to muscles and to which it can bind tight, and it can bind tight, grasping power correctly, and power can be changed flexibly is required.

[0011]As an instrument which can be used in order to check the blood flow which flows into muscles, there is a securing tool which these people indicated on the specifications of the Heisei 5 patent application No. 313949 of point ** and which a belt binds tight and checks a blood flow by power.

[0012]Since it is possible to narrow the width, there is an advantage that it can be correctly attached to a suitable part to the muscles which are going to check a blood flow in the above-mentioned securing tool. However, in this securing tool, when exact measurement of the bolting pressure given to muscles enables exact measurement of bolting pressure difficultly, there is fault that that manufacturing cost becomes a little expensive.

[0013]MANSHIEFUTO for blood pressure measurement which checks a blood flow as an instrument which checks the blood flow which flows into muscles using the clamping force by pneumatic pressure is known widely.

[0014]This MANSHIEFUTO is the structure which arranged the tube made of rubber on the inside of a binding belt.

A binding belt is twisted around an arm and clamping force is given to an arm by sending air into a tube.

And it binds tight to this MANSHIEFUTO easily by adjustment of pneumatic pressure, and there is an advantage that power can be adjusted in it. However, since the width of the binding belt twisted around muscles is too wide on the other hand, When there was fault that it could not be correctly attached to the higher rank of the muscles of the request which is going to reinforce, and a binding belt is broad and MANSHIEFUTO is attached to a muscular higher rank, Even if it ***, in order that a binding belt may cover muscles, it becomes difficult to exercise becoming the hindrance of muscular contraction and using it in the case of movement.

[0015]Thus, although fault is with an above-mentioned instrument to perform the muscular build-up method for which the applicant of this application applied previously, For these people who desire to spread the above-mentioned muscular build-up method widely as a simple thing, since familiarity was technically established to the public and used a Prior art for him deeply, the direction of MANSHIEFUTO producible by low cost met an applicant's intention.

[0016]From such a viewpoint, the applicant of this application made what narrowed width of the binding belt of MANSHIEFUTO for blood pressure measurement as an experiment, and did the examination. However, if width of a binding belt is narrowed, the width of the tube formed in the

centrum inside a binding belt will also become narrow. When air was sent and pressurized at this, a tube was not able to expand toward the outside direction, and it was not able to escape outside, without applying the pressure produced by expansion of a tube to muscles, and suitable draw-down power was not able to be added to muscles.

[0017]

[Means for Solving the Problem] These people continue the further research, if a tube tends to expand to an outside direction, come to acquire knowledge that what is necessary is just to form a means to readjust the expansion direction of a tube in an inner side direction in a muscular build-up implement, and used to complete the following inventions, in order to conquer such fault.

[0018] A muscular build-up instrument of this invention uses structure with conventional MANSHIEFUTO so that clearly from the above explanation, and it adds improvement to it. A securing tool of this invention serves as a binding belt which is a portion which twists around muscles and gives ** to muscles, and a pneumatic pressure indicator from a terminal area which connects a pump and these mutually, respectively, if it says roughly.

[0019] In a muscular build-up implement of this invention, as a field of the outside of a tube established there was met, a baffle is formed in an inside of a binding belt. When this binding belt is twisted around a muscular predetermined region and air is sent to a tube from a pump, this baffle readjusts the expansion direction of a tube so that a tube may swell to an inner side direction. By making clamping force by pneumatic pressure act inside efficiently, it is for producing strong clamping force over muscles. Suppose that a side (side which faces muscles) near the center of a loop at the time of twisting a muscular build-up instrument around muscles is called inside, and the opposite hand is called outside in this specification.

[0020] If this baffle can bear ** from a tube, that construction material in particular will not be limited. However, since a baffle is in an inside of a binding belt and is twisted around muscles with a binding belt, ductility of a grade whose it becomes possible is required for it. Specifically, this baffle can be formed with resin, such as VCM/PVC, polypropylene, and polyester.

[0021] By existence of this baffle, with a muscular build-up instrument of this invention, although width of a binding belt is narrower than conventional MANSHIEFUTO, a blood flow which flows into muscles can be checked well. therefore, a thing for which width which gives ** to muscles is made small — a position of a muscular request — exact — a muscular build-up instrument — attachment **** — while becoming like, a binding belt ceases to become the hindrance of muscular contraction by keeping a muscular build-up instrument from hanging on muscles which perform contraction by movement.

[0022] Width of this binding belt is good for less than about 4.5 cm to be referred to as less than about 9 cm, when using it for enhancement of muscles of an arm, and using for enhancement of muscles of a leg. This is for inconvenience of it becoming impossible to exercise freely by a binding belt covering muscles to arise, when width of a binding belt becomes more than this. It cannot be overemphasized that it will be necessary to change width of a binding belt with a user's physique, muscular thickness, etc. If width of a binding belt shall be 1 cm or less, since a binding belt will become a cause which eats into a user's skin and produces a pain, cautions are required.

[0023] Next, a thick elastic body is provided in a medial surface of a binding belt at a muscular build-up instrument of this invention. This is provided in order to set ***** pressure thru/or clamping force constant with the whole binding belt at muscles. That is, when this elastic body did not exist, a binding belt is twisted around muscles, and two or more folds go into a binding belt, a fold goes also into a tube inside a binding belt, and, thereby, a tube is divided by two or more areole. When such a state is allowed, it also becomes impossible to grasp exact clamping force which a tube has given to muscles, and to give uniform clamping force to muscles. Then, by providing a thick elastic body along a medial surface of a binding belt, a fold is prevented from being attached to a binding belt and a tube of the inside, and uniform clamping force is given to muscles with the whole binding belt.

[0024] As for this elastic body, it is preferred to consider it as neoprene rubber. Although about 6

mm of the thickness is enough, since it will become the hindrance of volume attachment of a binding belt to muscles becoming difficulty, and a tube expanding inside if it exceeds 12 mm, it is good to be referred to as 6 mm – 12 mm.

[0025]The above-mentioned connecting means is a tubular elastic body, and connects a tube inside a binding belt, a pneumatic pressure indicator, and a pump. If this connecting means shall be used as the same communication trunk (rubber tube) as conventional MANSHIEFUTO and a tube inside a binding belt, a pneumatic pressure indicator, and a pump shall be connected via a splicer of triradius, since parts of MANSHIEFUTO can be used, it is convenient.

[0026]And stops for preventing an air leak from a tube are provided in a communication trunk connected with a tube inside a binding belt among the above-mentioned communication trunks. In the case of use, a muscular build-up instrument of this invention twists a binding belt around a part of predetermined muscles, fixes a path of a binding belt by a fixing means, it sends air into a tube with a pump, checking atmospheric pressure in a tube with a pneumatic pressure indicator, and as it gives fixed clamping force to muscles, it uses it for them. In this case, keeping pneumatic pressure in a tube constant, since an omission of air from a tube can be prevented by the above-mentioned stops, a binding belt can be separated from a pneumatic pressure indicator and a pump, and it becomes easy to exercise in the state where it equipped with a muscular build-up instrument.

[0027]

[Embodiment of the Invention]Hereafter, an embodiment of the invention is described according to drawing 1 – drawing 3.

[0028]Drawing 1 is a perspective view of the muscular build-up instrument of this invention. And one in drawing 1, a pump and 3 are pneumatic pressure indicators a binding belt and 2, and each is mutually connected via the connecting means 4.

[0029]Drawing 2 is a sectional view of the binding belt 1. A binding belt makes tubed two thick cloth about 5 cm wide by sewing up the both-ends portion of a longitudinal direction, and the inside has become in midair.

[0030]The tube 5 is formed in the inside of the binding belt 1. The tube 5 is a product made of rubber, and can bear the pneumatic pressure of about 200 mmHg.

[0031]The lateral surface of the tube 5 is met inside the binding belt 1, and the baffle 6 is ***** further. The baffle 6 is a plate about 4 cm wide, and is a product made of polypropylene resin.

[0032]7 is the neoprene rubber as an elastic body. The elastic body 7 is formed corresponding to the portion which contacts an arm, when a binding belt is twisted around an arm. The thickness has been about 8 mm.

[0033]8 is Velcro (registered trademark) as a fixing means.

[0034]9 is a communication trunk which constitutes the connecting means 4. And 9a, 9b, and 9c are communication trunks connected to the tube 5, the pump 2, and the pneumatic pressure indicator 3 of binding belt 1 inside, respectively. Let each of these communication trunks 9a, 9b, and 9c be the pipes made of rubber. 10 is a splicer for connecting the communication trunks 9a, 9b, and 9c, and is three-forked shape parts in the air.

[0035]13 is a clip as stops and maintains the pneumatic pressure in the tube 5 by putting the communication trunk 9a.

[0036]Next, the directions for this device are explained according to drawing 3.

[0037]In order to perform muscular build-up using the securing tool of this invention, the binding belt 1 is first twisted around the epistatic region of the muscles which desire enhancement. It is a figure of an enhancement case which drawing 3 shows about an upper arm 2 grade muscle, and it has twisted the binding belt 1 around the portion from the heart of an upper arm 2 grade muscle. The securing tool of this invention is suitable for reinforcing the muscles of an arm or a leg.

[0038]Next, the binding belt 1 is fixed using the fixing means 8 so that the path of the loop made with the binding belt 1 may not change. In this case, since clamping force with the pneumatic

pressure and the binding belt 1 concerning the tube 5 of binding belt 1 inside stops corresponding when a crevice is between an arm and the binding belt 1, it is made for there to be no crevice between an arm and the binding belt 1.

[0039]Next, air is sent into the tube 5 with the pump 2. Grasping the pneumatic pressure in the tube 5 with the pneumatic pressure indicator 3 in that case, air is sent in until it becomes a suitable pressure.

[0040]And if the pneumatic pressure in the tube 5 becomes suitable, it will carry out whether it is made to exercise for the muscles which neglect it for a while in the state, or tried to aim at enhancement, and addition will be given to muscles. In this case, although it is [a muscular enhancing effect] naturally higher to exercise, it turns out that neglecting it, without exercising can even acquire a muscular enhancing effect.

[0041]When making it exercise for muscles, as the communication trunk 9a is shut with the clip 11 and air does not leak from the tube 5 of the binding belt 1, since, it is good to make the communication trunk 9a and the splicer 10 separate. Drawing 3 shows this state.

[0042]

[Effect of the Invention]since the muscular build-up implement of this invention is constituted as mentioned above -- enhancement -- it is going to plan -- the blood flow which flows into muscles being checked and, The instrument for blood pressure measurement can be used except a binding belt so that it is possible to perform [which could bind tight, could bind tight, having grasped power correctly, and could change power flexibly, and attached this instrument] light movement, given to muscles.

[0043]Therefore, since exact measurement of the bolting pressure in the case of using a muscular build-up instrument is attained, and a connecting means will not become obstructive when exercising using this if the muscular build-up instrument by this invention is used, These people can enforce more easily the muscular build-up method for which it applied previously.

[Translation done.]

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

TECHNICAL FIELD

[Field of the Invention]This invention relates to a muscular training apparatus usable not only in a healthy person but those who have an obstacle in a motor function, and the muscular build-up method especially about the muscular build-up instrument used for muscular enhancement, and the muscular build-up method using it.

[Translation done.]

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

PRIOR ART

[Description of the Prior Art]Generally in the conventional muscular-power-strengthening method, the muscular build-up instrument which gives load to muscles using the resistance force based on the elastic force of heavy lifts, such as a dumbbell and a barbell, a spring, rubber, etc., etc., etc. is used.

[0003]By the way, muscular enhancement is performed through the process of "super compensation." Here, "super compensation" means that the state before destroying a muscle cell by the recovery process of fatigue will be exceeded by muscles, when muscles are tired by training and a muscle cell is destroyed. Therefore, in aiming at muscular build-up, it becomes important how muscles are tired efficiently or how if it puts in another way, load will be efficiently given to muscles.

[0004]The above-mentioned conventional muscular build-up method makes the weight of a dumbbell etc., and the load by movement given to muscles using elastic force, such as a spring, increase, and makes the fatigue which this produces to muscles increase. That is, by making ***** and the quantity of motion itself which muscles perform by that cause increase to the direction in which the elastic force produced for ***** gravity, a spring, etc. bars muscular movement to a dumbbell, fatigue is efficiently generated to muscles and this aims at muscular enhancement.

[0005]In order to increase a muscular enhancing effect in the case of such a conventional muscular build-up method, the weight and the resistance force of an instrument must be increased or the number of times of elastic movement must be increased. However, even if it increases the load by movement to muscles inconsistently, other muscles protect the increased load, distribution of load is performed, the muscles besides the purpose reinforce or muscles, a joint, etc. are damaged depending on the case.

[0006]That the difficulty of such a conventional muscular build-up method should be conquered, these people invent the epoch-making muscular build-up method, and are performing application of the patent application No. 313949 about it in Heisei 5.

[0007]The invention by the application is the method of a muscular [of giving and having load in muscles and aiming at muscular enhancement] reinforcing method by checking the blood flow which flows into muscles. The part near [when the contents are explained a little in more detail] the heart which approaches to the muscles which try to aim at enhancement, That is, it is the training method of the muscles which give the suitable load by blood-flow inhibition to muscles by adjusting the clamping force, make muscles produce fatigue to the higher rank part which approaches to the muscles, have [give clamping force which makes circulation check,] in it by that cause, and enable enhancement with muscular sufficient efficiency.

[0008]And in this muscular build-up method, muscles are efficiently tired by checking the blood flow which flows into muscles and checking supply of oxygen to muscles, and exclusion of the lactic acid and other wastes from muscles. That is, making smaller than before load by movement given to muscles, by giving the load by blood-flow inhibition to muscles, this muscular build-up method

compensates and has a total amount of the load given to muscles, and tries to aim at muscular enhancement.

[0009]Therefore, in this muscular build-up method, the fatigue produced to muscles becomes very large only by giving the light load by movement to muscles. Therefore, while this muscular build-up method can reinforce the purpose muscles more specifically by selection of the position which checks a blood flow, By decreasing the actual quantity of motion which muscles need to perform, it has the outstanding effect that it is possible to decrease damage to a joint or muscles, and a training period can be shortened further.

[0010]However, in order to enforce this method, it is possible to check the blood flow which flows into the muscles which try to aim at enhancement, and the muscular build-up instrument which has been given to muscles and to which it can bind tight, and it can bind tight, grasping power correctly, and power can be changed flexibly is required.

[0011]As an instrument which can be used in order to check the blood flow which flows into muscles, there is a securing tool which these people indicated on the specifications of the Heisei 5 patent application No. 313949 of point ** and which a belt binds tight and checks a blood flow by power.

[0012]Since it is possible to narrow the width, there is an advantage that it can be correctly attached to a suitable part to the muscles which are going to check a blood flow in the above-mentioned securing tool. However, in this securing tool, when exact measurement of the bolting pressure given to muscles enables exact measurement of bolting pressure difficultly, there is fault that that manufacturing cost becomes a little expensive.

[0013]MANSHIEFUTO for blood pressure measurement which checks a blood flow as an instrument which checks the blood flow which flows into muscles using the clamping force by pneumatic pressure is known widely.

[0014]This MANSHIEFUTO is the structure which arranged the tube made of rubber on the inside of a binding belt.

A binding belt is twisted around an arm and clamping force is given to an arm by sending air into a tube.

And it binds tight to this MANSHIEFUTO easily by adjustment of pneumatic pressure, and there is an advantage that power can be adjusted in it. However, since the width of the binding belt twisted around muscles is too wide on the other hand, When there was fault that it could not be correctly attached to the higher rank of the muscles of the request which is going to reinforce, and a binding belt is broad and MANSHIEFUTO is attached to a muscular higher rank, Even if it ***, in order that a binding belt may cover muscles, it becomes difficult to exercise becoming the hindrance of muscular contraction and using it in the case of movement.

[0015]Thus, although fault is with an above-mentioned instrument to perform the muscular build-up method for which the applicant of this application applied previously, For these people who desire to spread the above-mentioned muscular build-up method widely as a simple thing, since familiarity was technically established to the public and used a Prior art for him deeply, the direction of MANSHIEFUTO producible by low cost met an applicant's intention.

[0016]From such a viewpoint, the applicant of this application made what narrowed width of the binding belt of MANSHIEFUTO for blood pressure measurement as an experiment, and did the examination. However, if width of a binding belt is narrowed, the width of the tube formed in the centrum inside a binding belt will also become narrow, When air was sent and pressurized at this, a tube was not able to expand toward the outside direction, and it was not able to escape outside, without applying the pressure produced by expansion of a tube to muscles, and suitable draw-down power was not able to be added to muscles.

[Translation done.]

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

EFFECT OF THE INVENTION

[Effect of the Invention]since the muscular build-up implement of this invention is constituted as mentioned above -- enhancement -- it is going to plan -- the blood flow which flows into muscles being checked and, The instrument for blood pressure measurement can be used except a binding belt so that it is possible to perform [which could bind tight, could bind tight, having grasped power correctly, and could change power flexibly, and attached this instrument] light movement, given to muscles.

[0043]Therefore, since exact measurement of the bolting pressure in the case of using a muscular build-up instrument is attained, and a connecting means will not become obstructive when exercising using this if the muscular build-up instrument by this invention is used, These people can enforce more easily the muscular build-up method for which it applied previously.

[Translation done.]

*** NOTICES ***

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

MEANS

[Means for Solving the Problem]These people continue the further research, if a tube tends to expand to an outside direction, come to acquire knowledge that what is necessary is just to form a means to readjust the expansion direction of a tube in an inner side direction in a muscular build-up implement, and used to complete the following inventions, in order to conquer such fault.

[0018]A muscular build-up instrument of this invention uses structure with conventional MANSHIEFUTO so that clearly from the above explanation, and it adds improvement to it. A securing tool of this invention serves as a binding belt which is a portion which twists around muscles and gives ** to muscles, and a pneumatic pressure indicator from a terminal area which connects a pump and these mutually, respectively, if it says roughly.

[0019]In a muscular build-up implement of this invention, as a field of the outside of a tube established there was met, a baffle is formed in an inside of a binding belt. When this binding belt is twisted around a muscular predetermined region and air is sent to a tube from a pump, this baffle readjusts the expansion direction of a tube so that a tube may swell to an inner side direction. By making clamping force by pneumatic pressure act inside efficiently, it is for producing strong clamping force over muscles. Suppose that a side (side which faces muscles) near the center of a loop at the time of twisting a muscular build-up instrument around muscles is called inside, and the opposite hand is called outside in this specification.

[0020]If this baffle can bear ** from a tube, that construction material in particular will not be limited. However, since a baffle is in an inside of a binding belt and is twisted around muscles with a binding belt, ductility of a grade whose it becomes possible is required for it. Specifically, this baffle can be formed with resin, such as VCM/PVC, polypropylene, and polyester.

[0021]By existence of this baffle, with a muscular build-up instrument of this invention, although width of a binding belt is narrower than conventional MANSHIEFUTO, a blood flow which flows into muscles can be checked well. therefore, a thing for which width which gives ** to muscles is made small -- a position of a muscular request -- exact -- a muscular build-up instrument -- attachment **** -- while becoming like, a binding belt ceases to become the hindrance of muscular contraction by keeping a muscular build-up instrument from hanging on muscles which perform contraction by movement.

[0022]Width of this binding belt is good for less than about 4.5 cm to be referred to as less than about 9 cm, when using it for enhancement of muscles of an arm, and using for enhancement of muscles of a leg. This is for inconvenience of it becoming impossible to exercise freely by a binding belt covering muscles to arise, when width of a binding belt becomes more than this. It cannot be overemphasized that it will be necessary to change width of a binding belt with a user's physique, muscular thickness, etc. If width of a binding belt shall be 1 cm or less, since a binding belt will become a cause which eats into a user's skin and produces a pain, cautions are required.

[0023]Next, a thick elastic body is provided in a medial surface of a binding belt at a muscular build-up instrument of this invention. This is provided in order to set ***** pressure thru/or clamping

force constant with the whole binding belt at muscles. That is, when this elastic body did not exist, a binding belt is twisted around muscles, and two or more folds go into a binding belt, a fold goes also into a tube inside a binding belt, and, thereby, a tube is divided by two or more areole. When such a state is allowed, it also becomes impossible to grasp exact clamping force which a tube has given to muscles, and to give uniform clamping force to muscles. Then, by providing a thick elastic body along a medial surface of a binding belt, a fold is prevented from being attached to a binding belt and a tube of the inside, and uniform clamping force is given to muscles with the whole binding belt.

[0024]As for this elastic body, it is preferred to consider it as neoprene rubber. Although about 6 mm of the thickness is enough, since it will become the hindrance of volume attachment of a binding belt to muscles becoming difficulty, and a tube expanding inside if it exceeds 12 mm, it is good to be referred to as 6 mm – 12 mm.

[0025]The above-mentioned connecting means is a tubular elastic body, and connects a tube inside a binding belt, a pneumatic pressure indicator, and a pump. If this connecting means shall be used as the same communication trunk (rubber tube) as conventional MANSHIEFUTO and a tube inside a binding belt, a pneumatic pressure indicator, and a pump shall be connected via a splicer of triradius, since parts of MANSHIEFUTO can be used, it is convenient.

[0026]And stops for preventing an air leak from a tube are provided in a communication trunk connected with a tube inside a binding belt among the above-mentioned communication trunks. In the case of use, a muscular build-up instrument of this invention twists a binding belt around a part of predetermined muscles, fixes a path of a binding belt by a fixing means, it sends air into a tube with a pump, checking atmospheric pressure in a tube with a pneumatic pressure indicator, and as it gives fixed clamping force to muscles, it uses it for them. In this case, keeping pneumatic pressure in a tube constant, since an omission of air from a tube can be prevented by the above-mentioned stops, a binding belt can be separated from a pneumatic pressure indicator and a pump, and it becomes easy to exercise in the state where it equipped with a muscular build-up instrument.

[0027]

[Embodiment of the Invention]Hereafter, an embodiment of the invention is described according to drawing 1 – drawing 3.

[0028]Drawing 1 is a perspective view of the muscular build-up instrument of this invention. And one in drawing 1, a pump and 3 are pneumatic pressure indicators a binding belt and 2, and each is mutually connected via the connecting means 4.

[0029]Drawing 2 is a sectional view of the binding belt 1. A binding belt makes tubed two thick cloth about 5 cm wide by sewing up the both-ends portion of a longitudinal direction, and the inside has become in midair.

[0030]The tube 5 is formed in the inside of the binding belt 1. The tube 5 is a product made of rubber, and can bear the pneumatic pressure of about 200 mmHg.

[0031]The lateral surface of the tube 5 is met inside the binding belt 1, and the baffle 6 is ***** further. The baffle 6 is a plate about 4 cm wide, and is a product made of polypropylene resin.

[0032]7 is the neoprene rubber as an elastic body. The elastic body 7 is formed corresponding to the portion which contacts an arm, when a binding belt is twisted around an arm. The thickness has been about 8 mm.

[0033]8 is Velcro (registered trademark) as a fixing means.

[0034]9 is a communication trunk which constitutes the connecting means 4. And 9a, 9b, and 9c are communication trunks connected to the tube 5, the pump 2, and the pneumatic pressure indicator 3 of binding belt 1 inside, respectively. Let each of these communication trunks 9a, 9b, and 9c be the pipes made of rubber. 10 is a splicer for connecting the communication trunks 9a, 9b, and 9c, and is three-forked shape parts in the air.

[0035]13 is a clip as stops and maintains the pneumatic pressure in the tube 5 by putting the communication trunk 9a.

[0036]Next, the directions for this device are explained according to drawing 3.

[0037]In order to perform muscular build-up using the securing tool of this invention, the binding belt 1 is first twisted around the epistatic region of the muscles which desire enhancement. It is a figure of an enhancement case which drawing 3 shows about an upper arm 2 grade muscle, and it has twisted the binding belt 1 around the portion from the heart of an upper arm 2 grade muscle. The securing tool of this invention is suitable for reinforcing the muscles of an arm or a leg.

[0038]Next, the binding belt 1 is fixed using the fixing means 8 so that the path of the loop made with the binding belt 1 may not change. In this case, since clamping force with the pneumatic pressure and the binding belt 1 concerning the tube 5 of binding belt 1 inside stops corresponding when a crevice is between an arm and the binding belt 1, it is made for there to be no crevice between an arm and the binding belt 1.

[0039]Next, air is sent into the tube 5 with the pump 2. Grasping the pneumatic pressure in the tube 5 with the pneumatic pressure indicator 3 in that case, air is sent in until it becomes a suitable pressure.

[0040]And if the pneumatic pressure in the tube 5 becomes suitable, it will carry out whether it is made to exercise for the muscles which neglect it for a while in the state, or tried to aim at enhancement, and addition will be given to muscles. In this case, although it is [a muscular enhancing effect] naturally higher to exercise, it turns out that neglecting it, without exercising can even acquire a muscular enhancing effect.

[0041]When making it exercise for muscles, as the communication trunk 9a is shut with the clip 11 and air does not leak from the tube 5 of the binding belt 1, since, it is good to make the communication trunk 9a and the splicer 10 separate. Drawing 3 shows this state.

[Translation done.]

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]The perspective view showing the muscular build-up implement of this invention.

[Drawing 2]The sectional view of the muscular build-up implement of this invention

[Drawing 3]The perspective view showing the condition of use of the muscular build-up implement of this invention.

[Description of Notations]

1 Binding belt

2 Pump

3 Pneumatic pressure indicator

4 Connecting means

5 Tube

6 Baffle

7 Elastic section

8 Fixing means

9 Communication trunk

10 Splicer

11 Stops

[Translation done.]

* NOTICES *

JPO and INPIT are not responsible for any damages caused by the use of this translation.

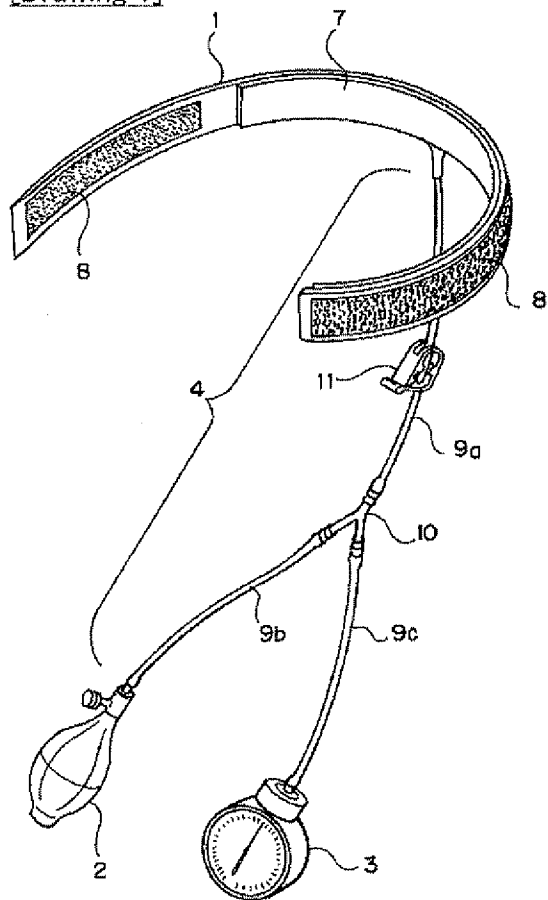
1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.*** shows the word which can not be translated.

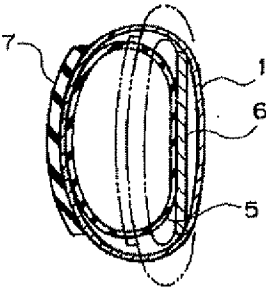
3.In the drawings, any words are not translated.

DRAWINGS

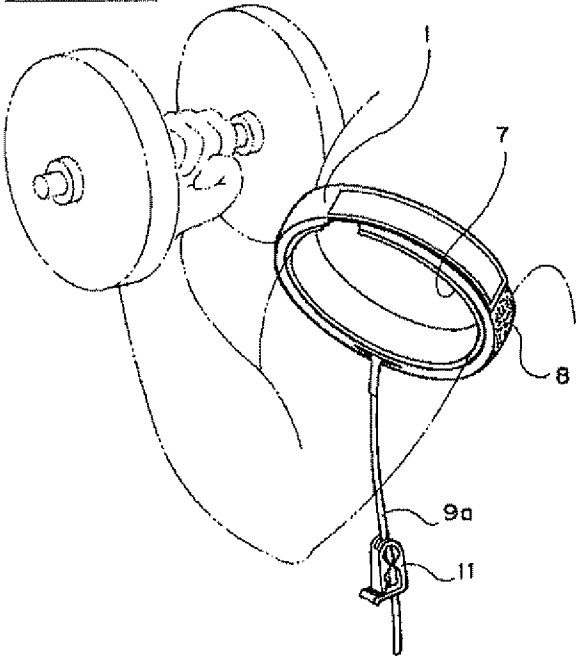
[Drawing 1]



[Drawing 2]



[Drawing 3]



[Translation done.]